Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 - 2. (Cancelled)

     3. (Currently Amended)   A method for image processing ~~as claimed in claim 1,~~ comprising:

     segmenting a field of view of a stereo camera in the form of a matrix by angle and by measured range value based on parallax;

     calculating matrix data for a segment where a detected edge exists and for segments surrounding said segment;

     assigning said calculated matrix data to each of said segments;

     searching through said assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value; and

     representing the position of an object by edge data of said edge, when said detected edge exists is said found segment,

     wherein said calculated matrix data is a value calculated by adding the matrix data for ~~the~~ a present cycle of detection to ~~the~~ a total value of the matrix data accumulated up to ~~the~~ last cycle of detection.
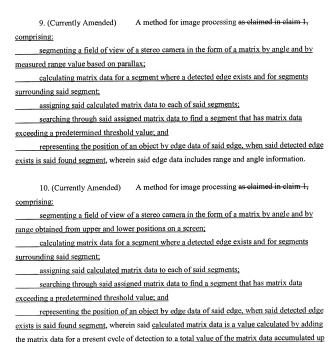
     4. (Original)   A method for image processing as claimed in claim 3, wherein, when said edge is not detected, said calculated matrix data is a value calculated by subtracting predetermined matrix data from the total value of the matrix data accumulated up to the last cycle of detection.

     5. (Currently Amended)   A method for image processing as claimed in claim 3, wherein, when the value of the matrix data to be added to the segment where said edge exists is

denoted by P1, then the value of the matrix data to be added to each of the segments neighboring on left, right, upper, and lower sides of said segment is denoted by P2, and the value of the matrix data to be added to each of the segments neighboring on diagonally upper and lower sides of said segment is denoted by P3, [[(]]where P1 > P2 > P3[[)]].

6. (Currently Amended)   A method for image processing ~~as claimed in claim 1,~~ comprising:

_____   segmenting a field of view of a stereo camera in the form of a matrix by angle and by measured range value based on parallax;

_____   calculating matrix data for a segment where a detected edge exists and for segments surrounding said segment;

_____   assigning said calculated matrix data to each of said segments;

_____   searching through said assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value; and

_____   representing the position of an object by edge data of said edge, when said detected edge exists is said found segment, wherein said calculated matrix data is a value calculated by multiplying ~~the~~ a total value of the matrix data accumulated up to ~~the~~ last cycle of detection, by a matrix coefficient ~~(>1)~~ greater than 1 for ~~the~~ a present cycle of detection.

7. (Original)   A method for image processing as claimed in claim 6, wherein, when said edge is not detected, said calculated matrix data is a value calculated by multiplying the total value of the matrix data accumulated up to the last cycle of detection, by a coefficient smaller than 1.

8. (Currently Amended)   A method for image processing as claimed in claim 6, wherein, when the coefficient by which to multiply the matrix data of the segment where said edge exists is denoted by Q1, then the coefficient by which to multiply the matrix data of each of the segments neighboring on left, right, upper, and lower sides of said segment is denoted by Q2,

and the coefficient by which to multiply the matrix data of each of the segments neighboring on diagonally upper and lower sides of said segment is denoted by Q3, [[(]]where Q1 > Q2 > Q3[[)]].

9. (Currently Amended)   A method for image processing as claimed in claim 1, comprising:

_____ segmenting a field of view of a stereo camera in the form of a matrix by angle and by measured range value based on parallax;

_____ calculating matrix data for a segment where a detected edge exists and for segments surrounding said segment;

_____ assigning said calculated matrix data to each of said segments;

_____ searching through said assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value; and

_____ representing the position of an object by edge data of said edge, when said detected edge exists is said found segment, wherein said edge data includes range and angle information.

10. (Currently Amended)   A method for image processing as claimed in claim 1, comprising:

_____ segmenting a field of view of a stereo camera in the form of a matrix by angle and by range obtained from upper and lower positions on a screen;

_____ calculating matrix data for a segment where a detected edge exists and for segments surrounding said segment;

_____ assigning said calculated matrix data to each of said segments;

_____ searching through said assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value; and

_____ representing the position of an object by edge data of said edge, when said detected edge exists is said found segment, wherein said calculated matrix data is a value calculated by adding the matrix data for a present cycle of detection to a total value of the matrix data accumulated up

to last cycle of detection ~~camera is a monocular camera and said matrix segmentation is done by~~ ~~segmenting the field of view of said monocular camera based on the angle and on the range~~ ~~obtained from upper and lower positions on a screen~~.

11. (Currently Amended)   A method for image processing, ~~wherein~~ comprising:

segmenting a ~~the~~ field of view of a stereo camera ~~is segmented~~ in the form of a matrix by angle and by measured range value based on parallax[[,]];

calculating matrix data ~~is calculated~~ for a segment where a detected edge exists, and also for segments surrounding said segment[[,]];

assigning said calculated matrix data ~~then being assigned~~ to each of said segments,

searching ~~a search is made~~ through said assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value[[,]];

if said edge does not exist in said found segment, successively increasing said threshold value ~~is successively increased,~~;

further searching ~~a search is made~~ successively to find a segment that has matrix data exceeding said increased threshold value[[,]]; and

if an edge detected at a past point in time corresponding to said increased threshold value exists in said found segment, representing a position of an object by edge data of said edge ~~is taken to represent the position of an object~~.

12. (Original) A method for image processing as claimed in claim 11, wherein said matrix segmentation is done based on a prescribed angle and in accordance with measured range values for integer values of parallax.

13. (Currently Amended)   A method for image processing as claimed in claim 11, wherein said calculated matrix data is a value calculated by adding the matrix data for ~~the~~ a

present cycle of detection to the total value of the matrix data accumulated up to the last cycle of detection.

14. (Currently Amended)   A method for image processing as claimed in claim 13, wherein when said edge is not detected, said calculated matrix data is a value calculated by subtracting predetermined matrix data from the total value of the matrix data accumulated up to the last cycle of detection.

15. (Currently Amended)   A method for image processing as claimed in claim 13, wherein when the value of the matrix data to be added to the segment where said edge exists is denoted by P1, then the value of the matrix data to be added to each of the segments neighboring on left, right, upper, and lower sides of said segment is denoted by P2, and the value of the matrix data to be added to each of the segments neighboring on diagonally upper and lower sides of said segment is denoted by P3, [[(]]where P1 > P2 > P3[[)]].

16. (Currently Amended)   A method for image processing as claimed in claim 11, wherein said calculated matrix data is a value calculated by multiplying the total value of the matrix data accumulated up to the last cycle of detection, by a matrix coefficient (> 1) greater than 1 for the present cycle of detection.

17. (Currently Amended)   A method for image processing as claimed in claim 16, wherein, when said edge is not detected, said calculated matrix data is a value calculated by multiplying the total value of the matrix data accumulated up to the last cycle of detection, by a coefficient smaller than 1.

18. (Currently Amended)   A method for image processing as claimed in claim 16, wherein, when the coefficient by which to multiply the matrix data of the segment where said edge exists is denoted by Q1, then the coefficient by which to multiply the matrix data of each of

the segments neighboring on left, right, upper, and lower sides of said segment is denoted by Q2, and the coefficient by which to multiply the matrix data of each of the segments neighboring on diagonally upper and lower sides of said segment is denoted by Q3, [[(]]where Q1 > Q2 > Q3[[)]].

19. (Original) A method for image processing as claimed in claim 11, wherein said edge data includes range and angle information.

20. (Currently Amended)   A method for image processing as claimed in claim 11, wherein said camera is a monocular camera and said matrix segmentation is done by segmenting the field of view of said monocular camera based on the angle and on the range obtained from upper and lower positions on a screen comprising:

        segmenting a field of view of a stereo camera in the form of a matrix by angle and by range obtained from upper and lower positions on a screen;

        calculating matrix data for a segment where a detected edge exists and for segments surrounding said segment;

        assigning said calculated matrix data to each of said segments;

        searching through said assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value;

        if said edge does not exist in said found segment, successively increasing said threshold value;

        further searching successively to find a segment that has matrix data exceeding said increased threshold value[; and

        if an edge detected at a past point in time corresponding to said increased threshold value exists in said found segment, representing a position of an object by edge data of said edge.